

Speed Dome

EPTZ3000/EPTZ3000I

USER MANUAL



Date: Feb15, 2006

Table of Contents

1.	EPTZ3000/EPTZ3000I OVERVIEW	1-3
1.1.	Introduction	1-3
1.2.	Specifications	1-5
1.3.	Feature	1-7
1.3.1.	Profile of EPTZ3000/EPTZ3000I	1-7
1.3.2.	EPTZ3000/EPTZ3000I Base Board	1-8
1.3.3.	EPTZ3000/EPTZ3000I Control Board	1-9
1.4.	EPTZ3000/EPTZ3000I Connection	1-10
1.5.	EPTZ3000/EPTZ3000I Quick Operation Guide (Work with EKB500)	1-11
2.	EPTZ3000/EPTZ3000I INSTALLATION	2-12
2.1.	Packing List	2-12
2.2.	Cable Needed.....	2-12
2.3.	Initial Setup	2-13
2.3.1.	Address Setting.....	2-14
2.3.2.	Communication Protocol Setting	2-17
2.3.3.	Transmission Speed Setting (Baud Rate Setting)	2-17
2.3.4.	RS-485 Bus Terminal Resistance	2-18
2.4.	Rack and Speed Dome Installation	2-19
2.4.1.	Installation Requirements	2-19
2.4.2.	EPTZ3000 Dome Camera Wall Mount Installation	2-19
2.4.3.	EPTZ3000I Dome Camera Installation.....	2-22
2.5.	Accessories	2-25
2.5.1.	EPTZ-CPMA: Ceiling Pendant Mount Adapter	2-25
2.5.2.	EPTZ-PMA: Pole Mount Adapter.....	2-25

2.5.3.	EPTZ- CMA: Corner Mount Adapter.....	2-26
3.	EPTZ3000/EPTZ3000I CAMERA SETUP MENU.....	3-27
3.1.	Structure of the Setup Menu	3-27
3.1.1.	Camera Setup Menu	3-28
4.	EPTZ3000/3000I FUNCTION SETUP AND OPERATION.....	4-34
4.1.	Manual Control Mode	4-34
4.2.	Auto Pan Mode	4-34
4.3.	Position Setting	4-34
4.4.	Tour Mode	4-35
4.5.	Alarm Link to a Position/Tour	4-36
4.6.	Other operations	4-36
	APPENDIX : The Alarm I/O Connection.....	4-37

1. EPTZ3000/EPTZ3000I OVERVIEW

1.1. Introduction

EPTZ3000/EPTZ3000I, an intelligent high-speed dome camera is ready to secure your property with its omni-directional and exact monitoring. A 30X optical and 8X digital zoom combining with a high-performance chip makes captured images clear and vivid. The other powerful camera functions EPTZ3000/EPTZ3000I equips with:

- Wide Dynamic makes objects clear in a high illumination background.
- Vertical double density interline CCD with a slower shutter and true Day/Night function.
- Electronics flip, no mechanical flip is necessary.
- 520 color/570 B&W TVL; PAL/NTSC image formats support.
- Auto and fast focus increases the searching speed and precision.
- Auto Iris adjusts the monitoring image to the best brightness.
- White Balance function makes the shades of color more natural in different light conditions.
- Color / B&W images auto switching to enhance the sensitivity in a low light condition or at night.
- Private zone protects your privacy.

Furthermore, the micro control unit enables camera a nimble and exact movement from minimal 0.01°/sec to maximal 360°/sec. It can go to every preset position in 1 second. It also has other advantages such as:

- 239 preset positions are available.
- 16 cruise tours can be set, and each tour contains up to 16 positions.
- Up to 256 speed domes can be supported on a RS-485 bus when all speed domes are controlled by keyboard EKB500.
- Auto heater and fan to fit all kinds of temperature (outdoor models).
- Built-in 4 alarm inputs and 1 alarm output.

All of the features make the intelligent high-speed dome camera works for a wide range and demanding application such as banks, airports, stations, casinos, streets of cities, intelligent buildings, and etc.

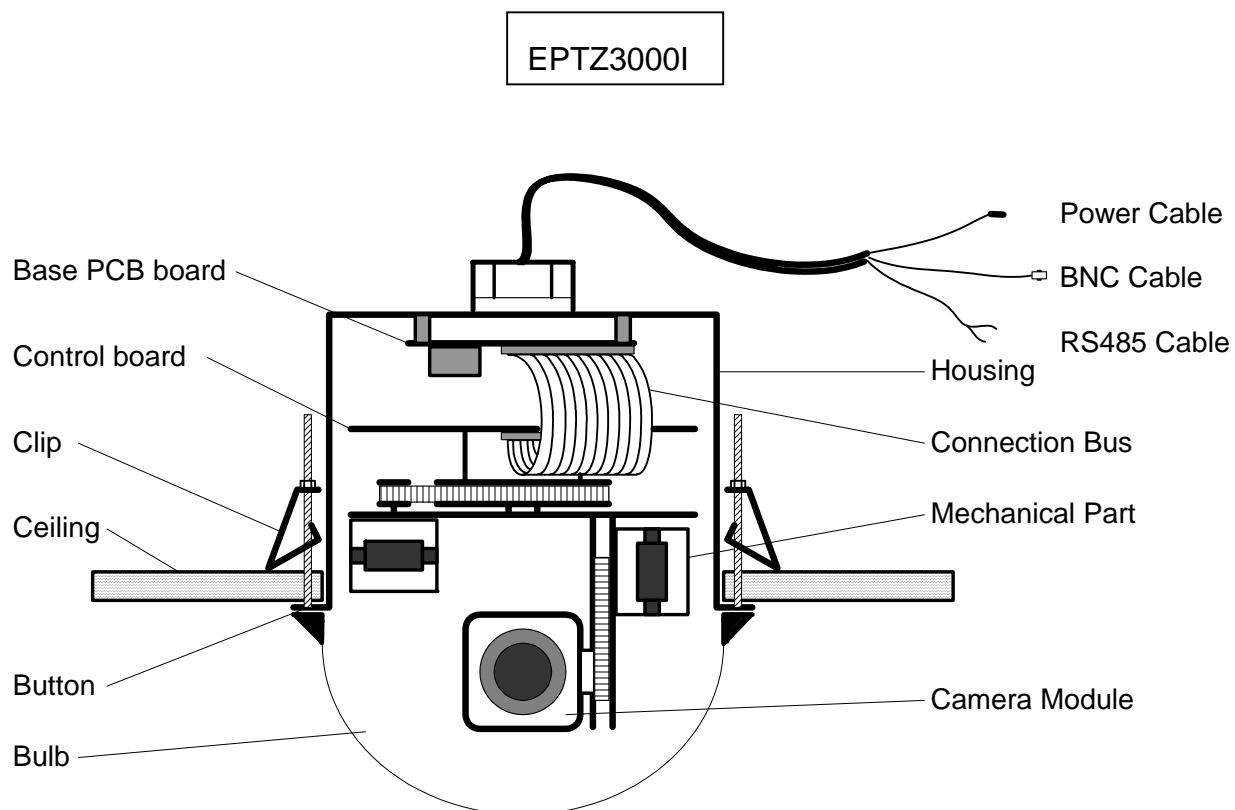
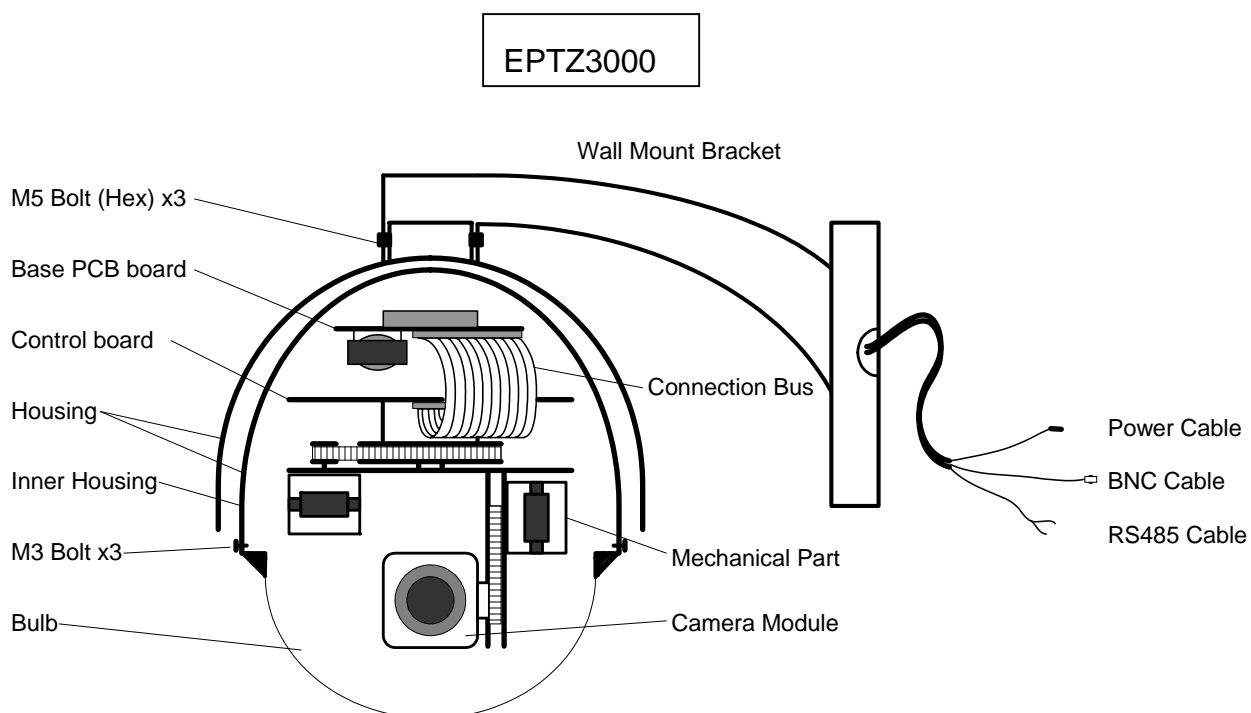
1.2. Specifications

Model	EPTZ3000 (outdoor)	EPTZ3000I (indoor)
Power Supply	AC 24V	
Power consumption	70W with heater	18W without heater
Operating temperature	- 40 ~+60	0 ~+40
Image device	1/4", Vertical double density interline CCD	
Zoom ratio	30x Optical (8x Digital zoom, max 240x)	
Lens	30x optical zoom, f=3.3 mm (wide) to 99.0 mm (tele), F1.6 to F3.2	
Viewing angle	H: Approx. 58.0° (wide) to 2.22° (tele end) V: Approx. 44.8° (wide) to 1.68° (tele end)	
Resolution	520 TVL : Color; 570 TVL : B/W	
WDR (Wide Dynamic Range)	52dB	
Minimum illumination	0.3 lux/F1.6 (50 IRE) Color; 0.05 lux/F1.6 (50 IRE) B/W	
Focus	Auto/Manual	
Iris Control	Auto/Manual	
Shutter selection	ESC; A.FLK; Manual (1/120000~x8) selectable	
Operating moisture	≤95%	
Communication	RS-485	
Communication speed	1200/2400/4800/9600bps	
Horizontal rotation speed	0.01°/s - 360°/s (1-239 grade shift gears)	
Horizontal rotation range	360° unlimited rotation	
Tilt rotation range	180° pendulum motion	
Auto zoom speed control	Control speed auto-adjusted according to zoom length changing	
Auto Pan, 2 points scanning	Can set freely	
Auto Pan speed	1 - 239 grade available	
Dwell time (2 points)	1 - 239 second available	
Preset Positions	239 positions	
Running to position speed	1 - 239 grade available, 0.01°/s - 360°/s	
Dwell time at preset position	1 - 60s available	
Tour	16 group	
Tour point per group	16 preset positions	
Fan, Heater (outdoor model)	Fan and heater auto starts	
Position Accuracy	±0.1°	
Alarm	4 in 1 out with tour/position auto triggering	
Proportional Pan Speed	Yes	
Built-in menu for functions	Yes	
Built-in Protocols	EVF-1, Pelco-P, Pelco-D, A-Type	

Communication	RS-485
Address editable	Yes (through DIP switch)
Speed Dome Address	0-255
Manual Pan/tilt speed	Pan: 0.01° ~ 360°/s ; Tilt: 0.01° ~ 360°/s
Video Output	BNC
Safety	CE, FCC
Dimension	220(W) x 310(H)mm
Weight	3.2kg

1.3. Feature

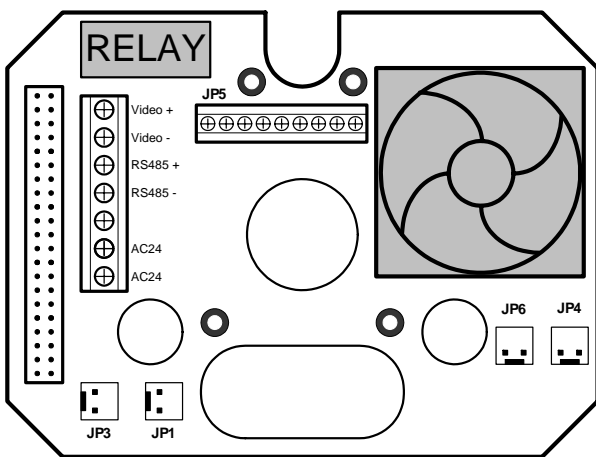
1.3.1. Profile of EPTZ3000/EPTZ3000I



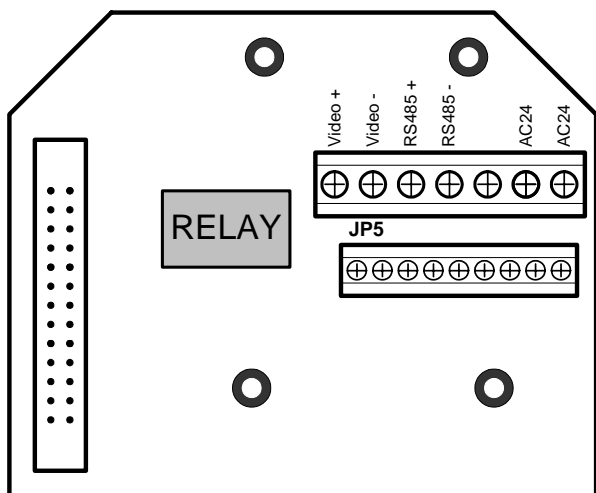
1.3.2. EPTZ3000/EPTZ3000I Base Board

The base board that is on the bottom of the housing connects to power cable, video cable, control cable, alarm cable, fan and heater. In order to connect to cables, the board needs to be taken off, and put back after finishing connecting to all cables. The connectors of cable names are marked on the board in white text. The details of the alarm connector (JP5) are shown on the APPENDIX A.

For EPTZ3000 outdoor model, JP1, JP3 and JP6 that are two-pin connectors need to be taken off during installing. JP1 and JP3 are connectors for heater, and they can be switched. JP6 is a fan controller connector that turns on/off of the fan. The 3 cables are too short to be connected to a wrong connector when putting them back.



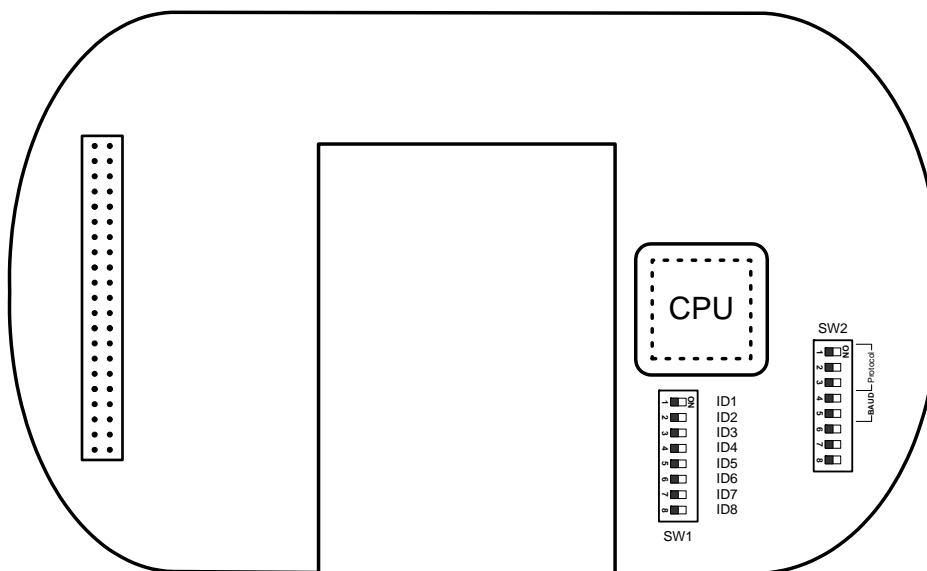
EPTZ3000 Baseboard



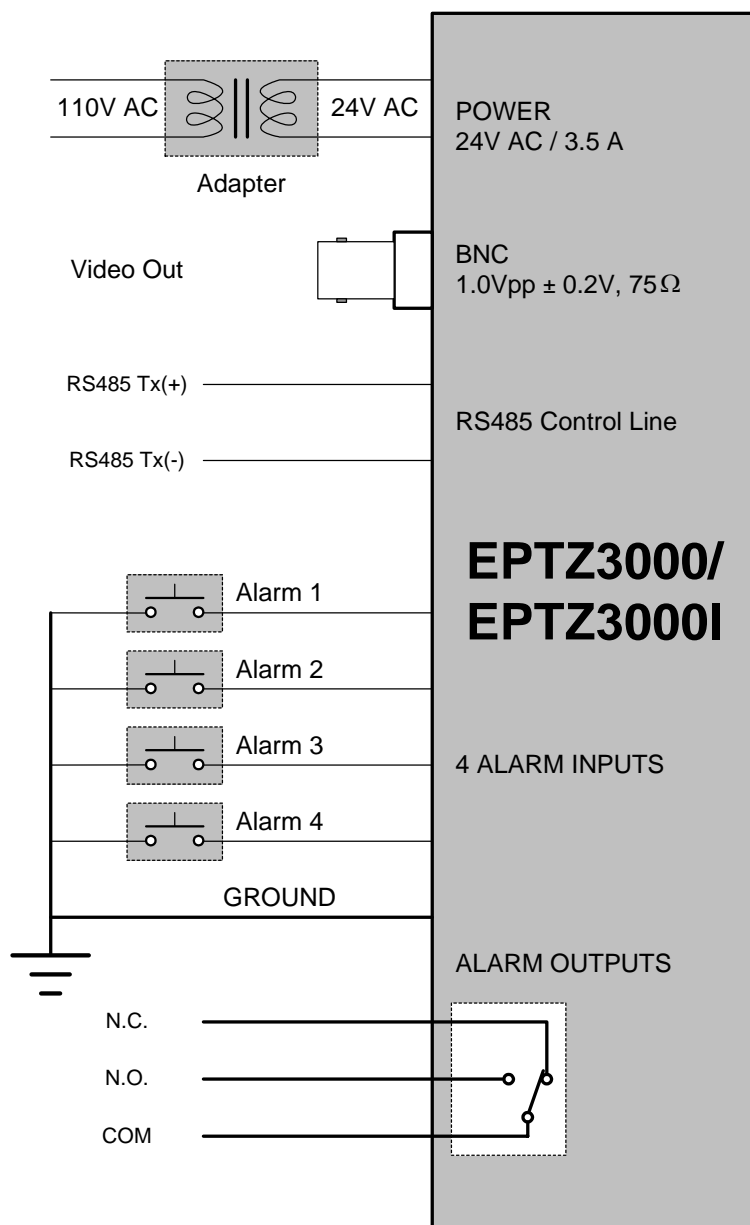
EPTZ3000I Baseboard

1.3.3. EPTZ3000/EPTZ3000I Control Board

The PCB board with two dipswitches is the control board of EPTZ3000/EPTZ3000I. The two switches are used to set address, protocol, Baud Rate, video format and terminal resistance.



1.4. EPTZ3000/EPTZ3000I Connection



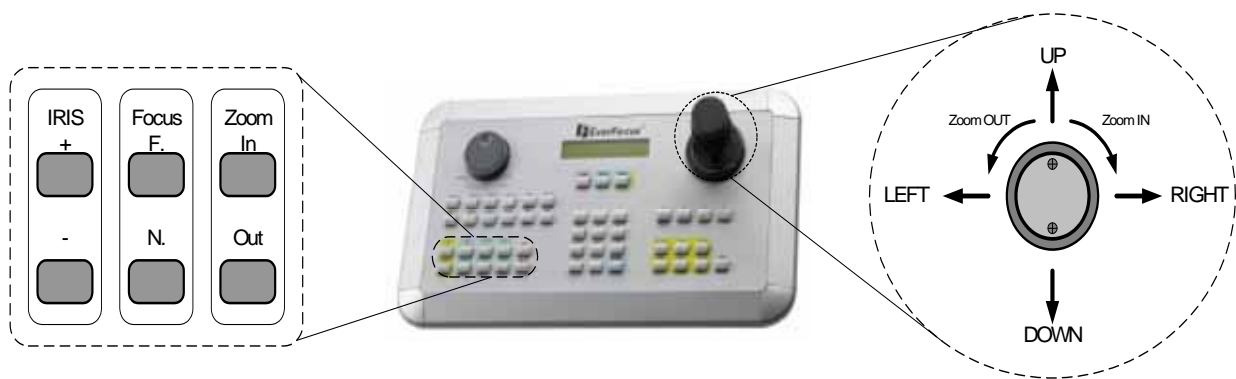
1.5. EPTZ3000/EPTZ3000I Quick Operation Guide (Work with EKB500)

EPTZ3000/EPTZ3000I and EKB500 (Keyboard) can work together by using factory default setting. You just need to connect cables by the following steps:

1. Connect the RS-485 cable to EPTZ3000/EPTZ3000I and a keyboard (EKB500).
2. Connect a video cable from EPTZ3000/EPTZ3000I to a monitor.
3. Connect the power to the EPTZ3000/EPTZ3000I and a keyboard (EKB500).

After the EPTZ3000/EPTZ3000I finishes the self-test mode, you can start to operate the EPTZ3000/EPTZ3000I via the keyboard.

To operate the EPTZ3000/EPTZ3000I:



1. Shift the Joystick up/down or right/left to view from camera.
2. Turn the top of the Joystick to zoom in/out.
3. Press Zoom In/Out, Focus F. /N. and IRIS +/- function keys to operate the EPTZ3000/EPTZ3000I.

2. EPTZ3000/EPTZ3000I INSTALLATION

2.1. Packing List

There are 3 boxes that are housing, bulb and mechanical part with a camera module, one wall mount bracket, one power adapter and one tool packet in the package. The detail accessories list below:

- Housing x1
- Bulb x1
- Mechanical part with a camera module x1
- Wall mount bracket x1
- Adapter x1
- Tool packet
 - ✧ Glove x2
 - ✧ M5 Hex Allen wrench x1
 - ✧ Pin connector x1
 - ✧ M5 screw (Hex) x3 for wall mount bracket fixing
 - ✧ M3 screw x3 for bulb fixing

2.2. Cable Needed

Power Cable

An adapter with 24V AC/3.5A output provides the power to the EPTZ3000/EPTZ3000I. An extension power line may be needed.

Note: The input AC voltage range of an adapter depends on different area.

Please make sure the voltage range before installing.

Video Cable

A BNC cable is used for connecting an EPTZ3000/EPTZ3000I to a DVR or a monitor.

An amplifier may be needed if the video cable is too long.

Control Cable

Basically, EPTZ3000/EPTZ3000I uses a differential pair to connect to other devices by cascading. A cable that has low signal decline can be used as a control cable.

Alarm Cable

An alarm cable is not included in the packing list. A suitable wire that has low signal decline can be used as an alarm cable.

2.3. Initial Setup

Initial setup includes dome address, communication protocol, transmission speed, video format, and terminal resistance settings. All of the settings should be confirmed before the dome is installed. The control-related setting that is address, communication protocol and transmission speed have to be set consistently with the control device such as a keyboard or a DVR.

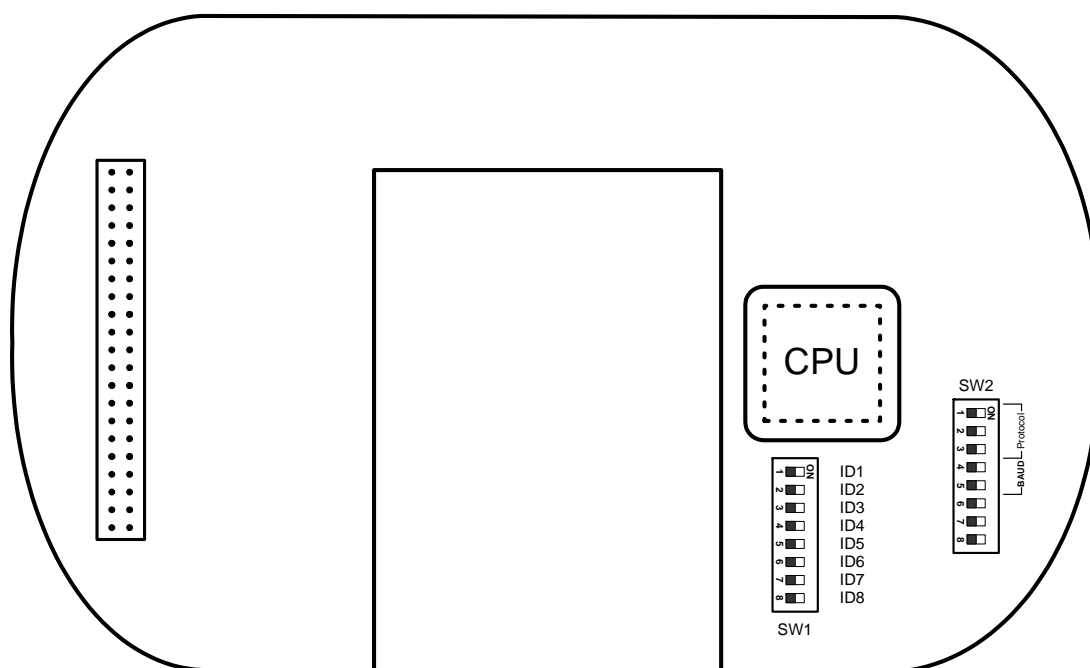
Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.











































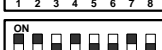















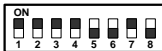
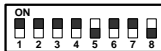








































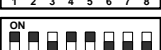
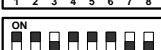
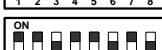









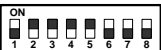
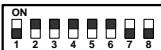
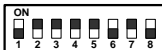
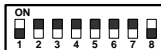
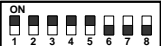
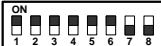










2.3.1. Address Setting






















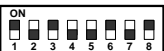



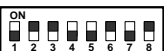






































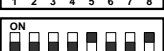
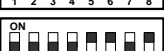
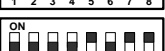
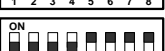
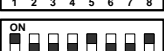
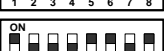


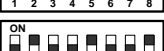
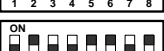
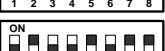
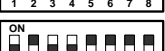
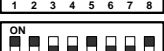
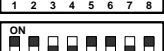
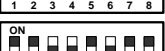
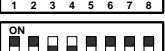
















































The address code of the EPTZ3000/EPTZ3000I should be set to correspond properly with a control device to control multiple dome cameras. The address codes are made up by the dipswitch SW1 (8 bits) on the PCB board. The 8 bits dipswitch indicates the binary coded of the address, and there are 256 addresses can be selected ($0 \sim 255$, $2^8 = 256$). It also means that there are up to 256 dome cameras that can cascade on the RS-485 bus. The dipswitch setting and the indicated address are represented in the following chart.

Note: The factory default address is 1.

Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.

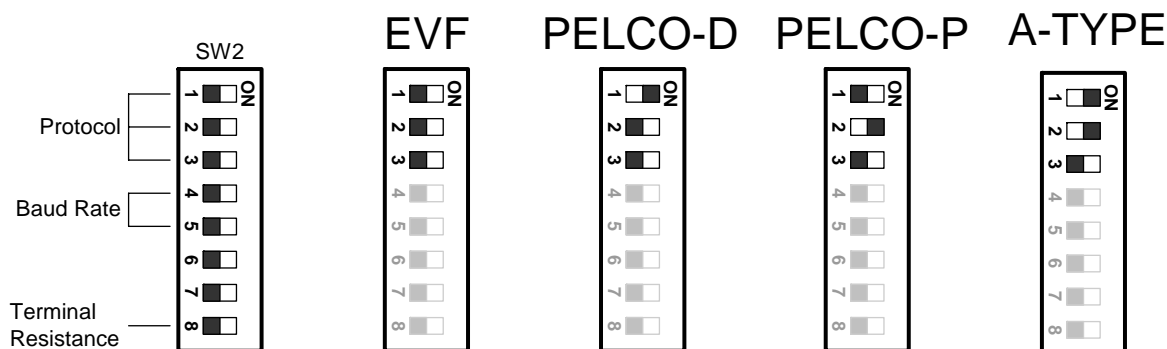


Switch	Address	Switch	Address	Switch	Address	Switch	Address
	0		32		64		96
	1		33		65		97
	2		34		66		98
	3		35		67		99
	4		36		68		100
	5		37		69		101
	6		38		70		102
	7		39		71		103
	8		40		72		104
	9		41		73		105
	10		42		74		106
	11		43		75		107
	12		44		76		108
	13		45		77		109
	14		46		78		110
	15		47		79		111
	16		48		80		112
	17		49		81		113
	18		50		82		114
	19		51		83		115
	20		52		84		116
	21		53		85		117
	22		54		86		118
	23		55		87		119
	24		56		88		120
	25		57		89		121
	26		58		90		122
	27		59		91		123
	28		60		92		124
	29		61		93		125
	30		62		94		126
	31		63		95		127

Switch	Address	Switch	Address	Switch	Address	Switch	Address
	128		160		192		224
	129		161		193		225
	130		162		194		226
	131		163		195		227
	132		164		196		228
	133		165		197		229
	134		166		198		230
	135		167		199		231
	136		168		200		232
	137		169		201		233
	138		170		202		234
	139		171		203		235
	140		172		204		236
	141		173		205		237
	142		174		206		238
	143		175		207		239
	144		176		208		240
	145		177		209		241
	146		178		210		242
	147		179		211		243
	148		180		212		244
	149		181		213		245
	150		182		214		246
	151		183		215		247
	152		184		216		248
	153		185		217		249
	154		186		218		250
	155		187		219		251
	156		188		220		252
	157		189		221		253
	158		190		222		254
	159		191		223		255

2.3.2. Communication Protocol Setting

The 1st, 2nd and 3rd bits of the SW2 are used to set communication protocol. The factory default protocol is EVF.



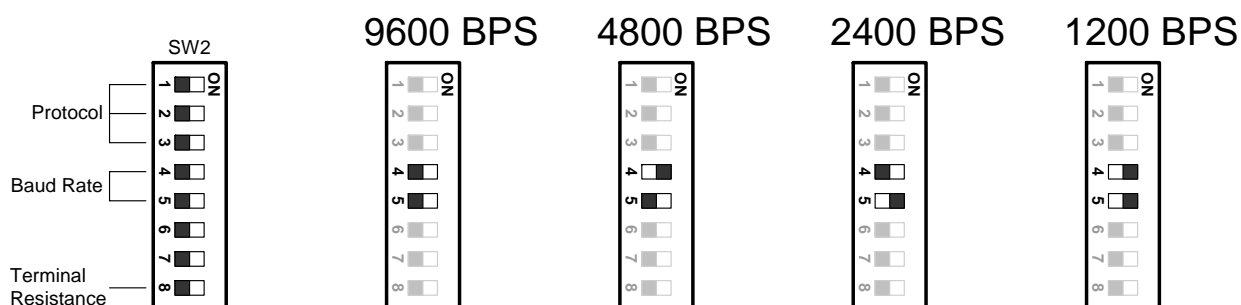
Notice: Please make sure the power is off before setting, and restart the

EPTZ3000/EPTZ3000I to enable a new value after changing.

Set all of protocol switches to ON; the speed EPTZ3000/EPTZ3000I will enter a self-test mode.

2.3.3. Transmission Speed Setting (Baud Rate Setting)

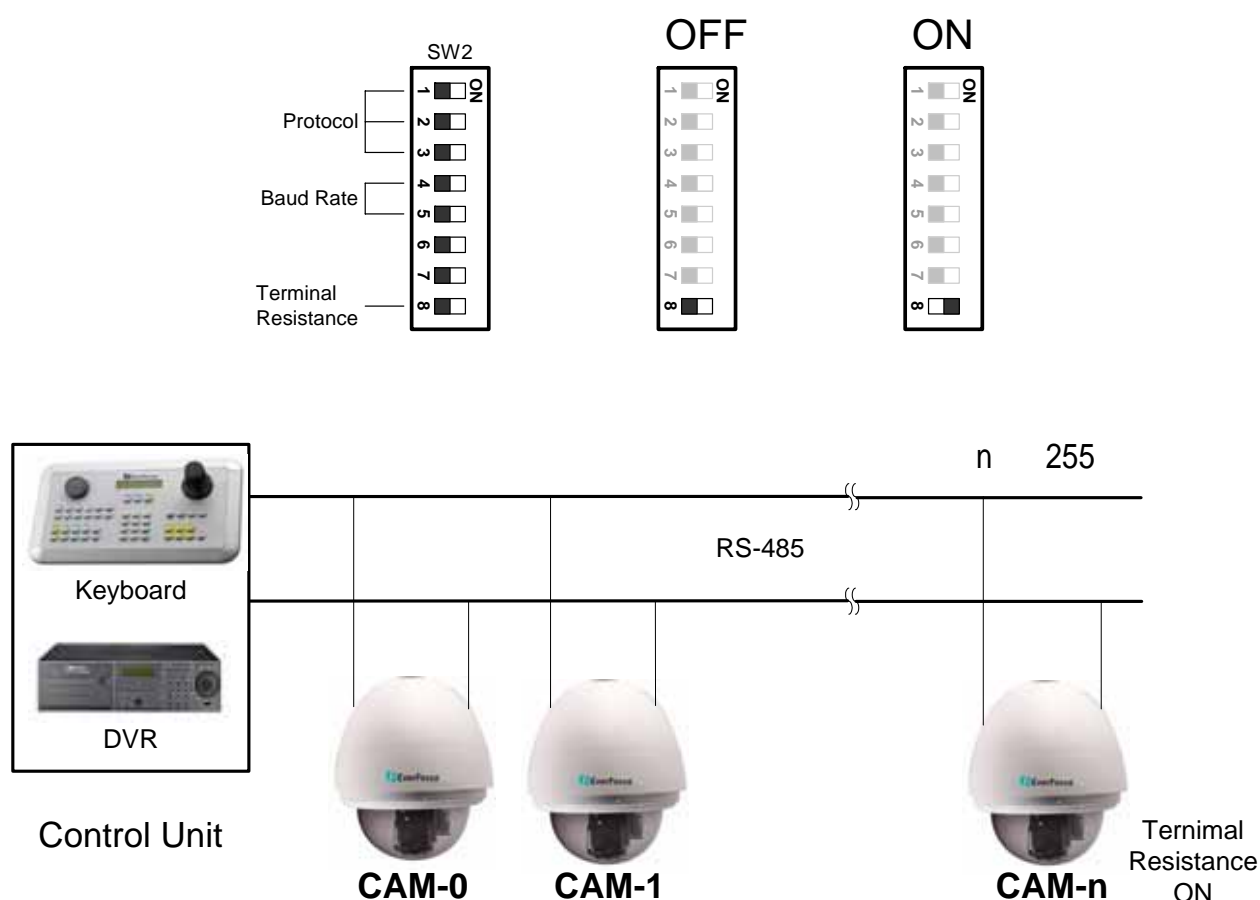
The 4th and 5th bits of the SW2 on the PCB board are used to set the Baud Rate. The default baud rate setting is 9600.



Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.

2.3.4. RS-485 Bus Terminal Resistance

For central controlling, the terminal resistance should be set for the device that is the furthest one away from the controller. The 8th bit on the SW2 is a switch to enable or disable the terminal resistance. When it is switched ON, the BUS terminal resistance is connected.



Note: When the dome is out of control, or does not work under control well, try to switch the terminal resistance ON.

Notice: Please make sure the power is off before setting, and restart the EPTZ3000/EPTZ3000I to enable a new value after changing.

2.4. Rack and Speed Dome Installation

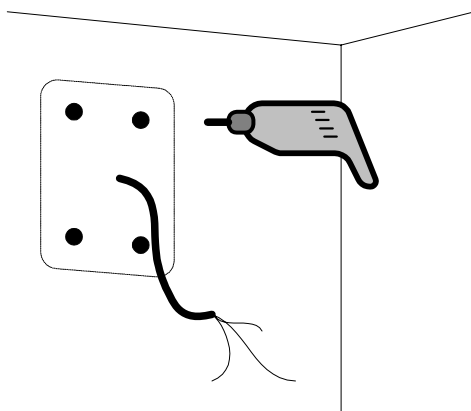
2.4.1. Installation Requirements

1. Installation should be handled by a qualified service agent and should comply with all local regulations. Service personnel should expect potential problems such as surface strength, surface material, falling objects, outer breaches, building vibration or other similar conditions.
2. Check for all necessary materials, and ensure if the selected installation location is suitable for the EPTZ3000/EPTZ3000I.

2.4.2. EPTZ3000 Dome Camera Wall Mount Installation

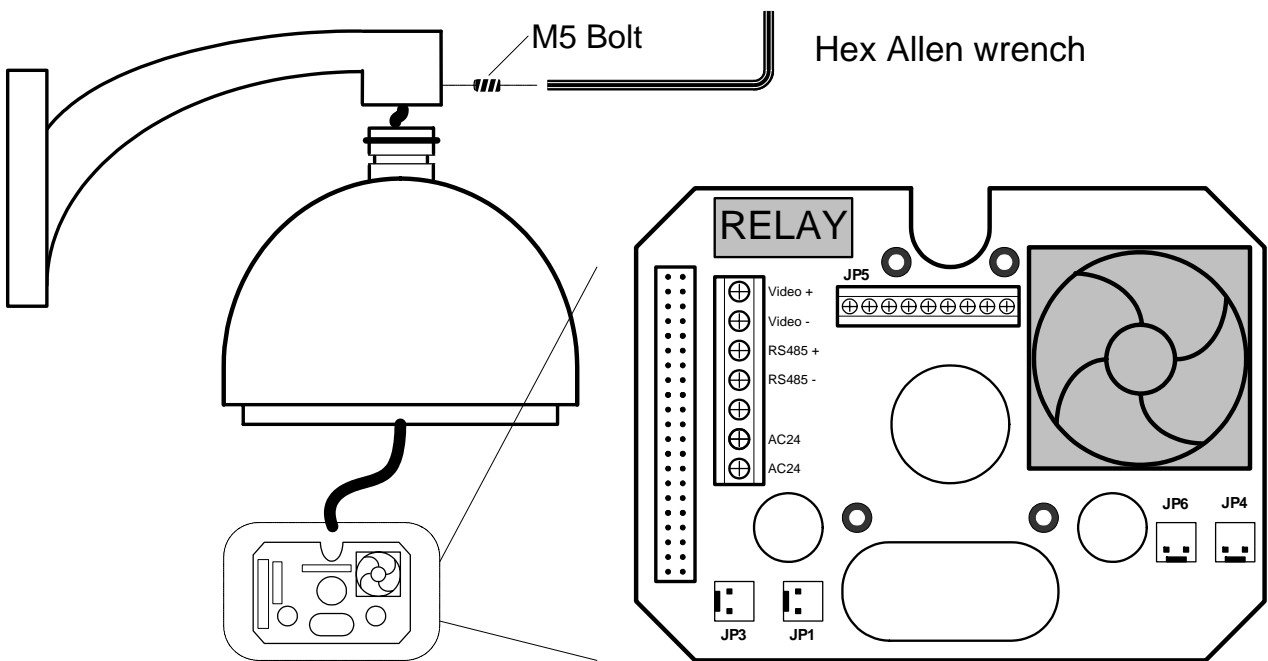
Notice: Installation location that is a wall, a pole or a ceiling needs to support above five times the total weight of the camera assembly (about 16 kg) to avoid shaken images, and dropping.

1. Set wall mount bracket on the wall. Mark the center of the holes on the wall against the bracket holes. Use a drill to make 4 holes that can be nailed 4 0.25" X 1.25" screws at the marks.



Notice: The length of the screws depends on the surface material. The mentioned screws are used in the normal concrete surface.

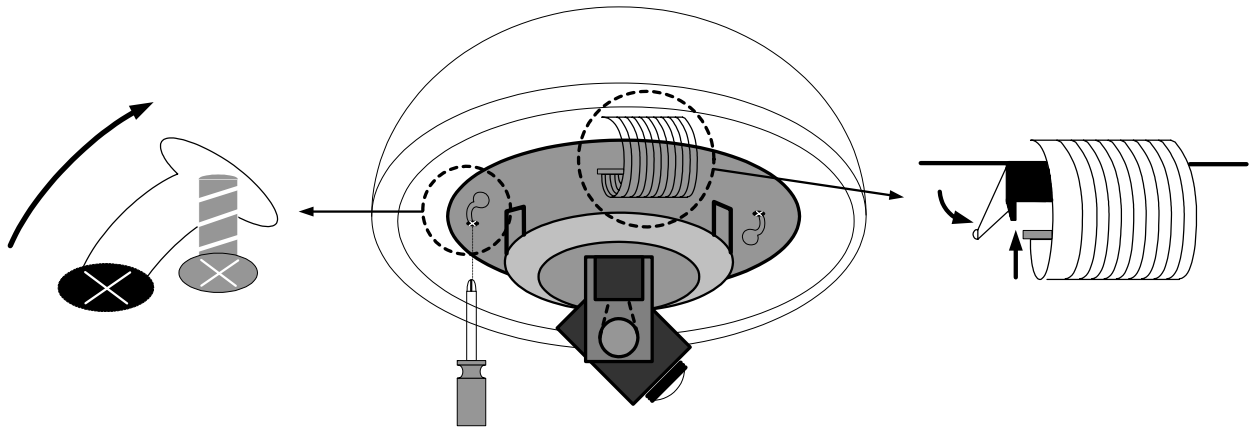
2. Thread the cable through the hole in the wall mount bracket, and screw in 4 M8 nuts for mounting the bracket.
3. Take off the housing from the packing, and take off the PCB board (4 bolts on it.) inside the housing. Thread the cable through the top of the housing. Fix the housing on the wall mount bracket, and screw in 3 M5 bolts (Hex) on the top of the bracket with the attached Hex Allen wrench to fix the housing.



4. Connect the cable connectors to the nodes on the PCB board, and then fix the PCB board in the housing by screwing 4 bolts on it.

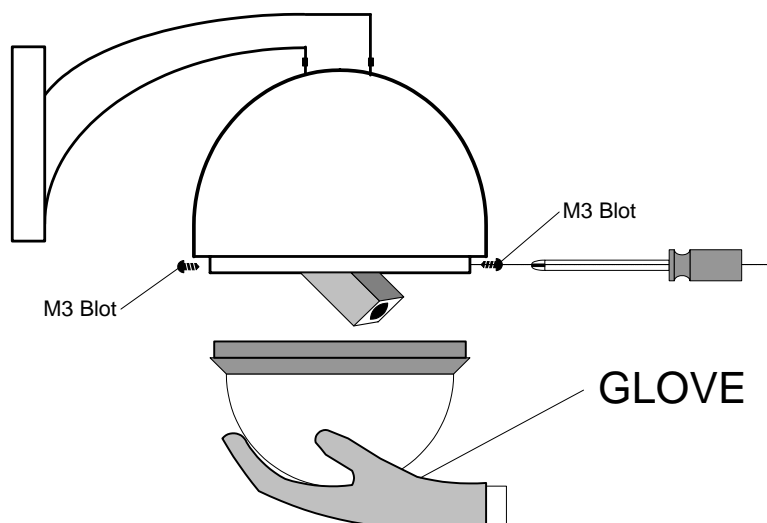
Notice: Please notice the polarity of control line. The EPTZ3000 will not work if the polarity of control line is mis-connected.

5. Align the two screw holes on the bottom of mechanical part to the two bolts on the base of the housing, and twist the mechanical part clockwise a little bit in order to engage it with the base. Screw the two bolts on the base, and then connect and fix the connection bus to the PCB board on the mechanical part.



Notice: The camera module on the mechanical part is very sensitive. Please be careful when installing this part.

6. Remove the lens protection cover before installing the bulb. Align the 3 bolt holes into the 3 housing bolt holes, and screw three M3 bolts with the attached small screw driver to fix the bulb.



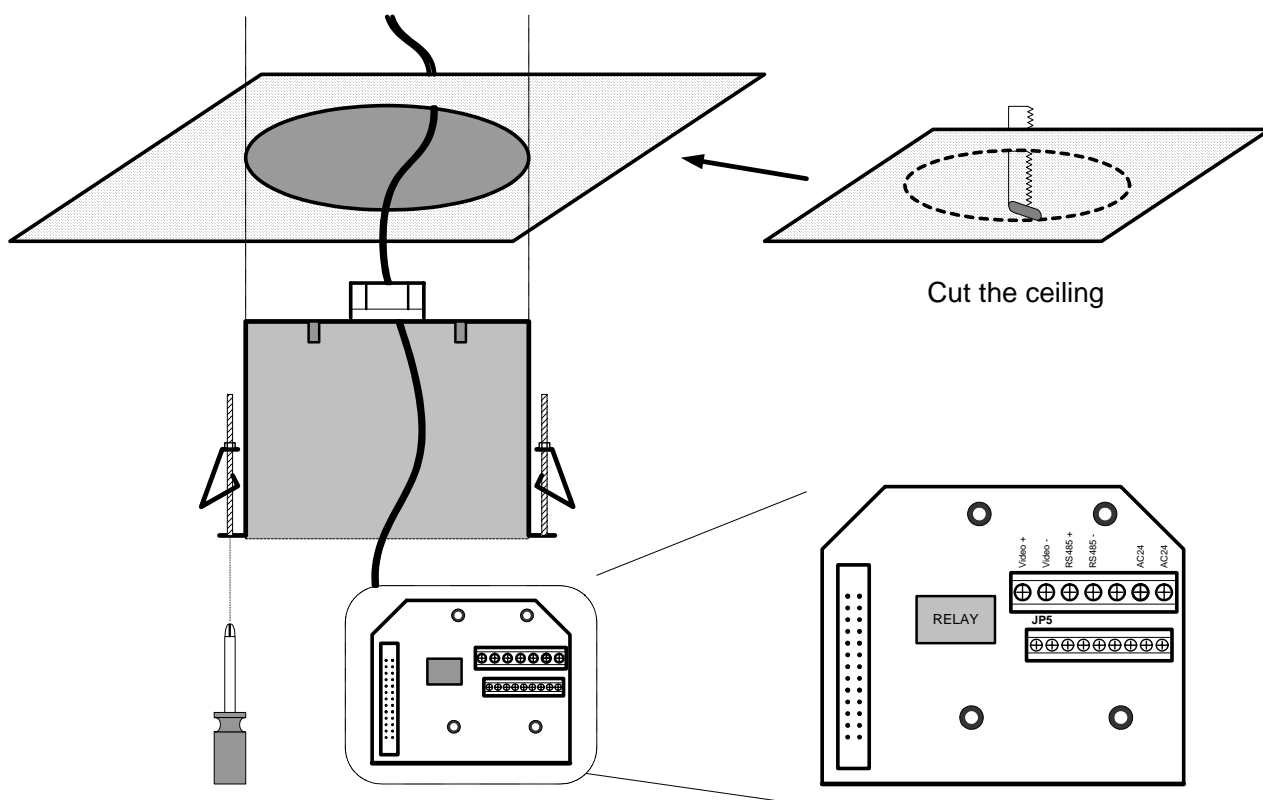
Notice: In order to protect the bulb from dirt and scrape, please put on the gloves before installing the bulb.

7. Turn on the power, and start to operate the EPTZ3000.

Note: When turning on the power, EPTZ3000 will enter self-inspection mode, and carry out a self-testing program. After finishing self-inspection, you can start to operate the EPTZ3000.

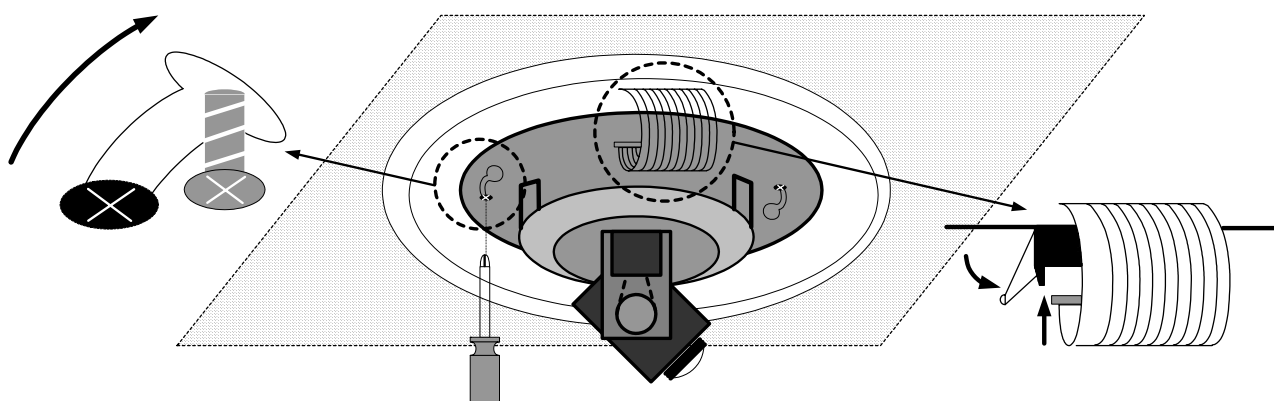
2.4.3. EPTZ3000I Dome Camera Installation

1. Take off the housing from the packing, and take off the PCB board (4 bolts on it) inside the housing.
2. Cut the ceiling against the housing's shape with a saw.
3. Thread the cable through the screw and the hole on the top of the housing, and tighten up the screw to fix the cable
4. Place the housing into the hole that you just made. Fix the housing on the ceiling with two clips, adjust the screws of clips to make the housing perfectly fit to the ceiling.
5. Connect the cable connectors to the nodes on the base board, and then fix the base board in the housing by screwing 4 bolts on it.



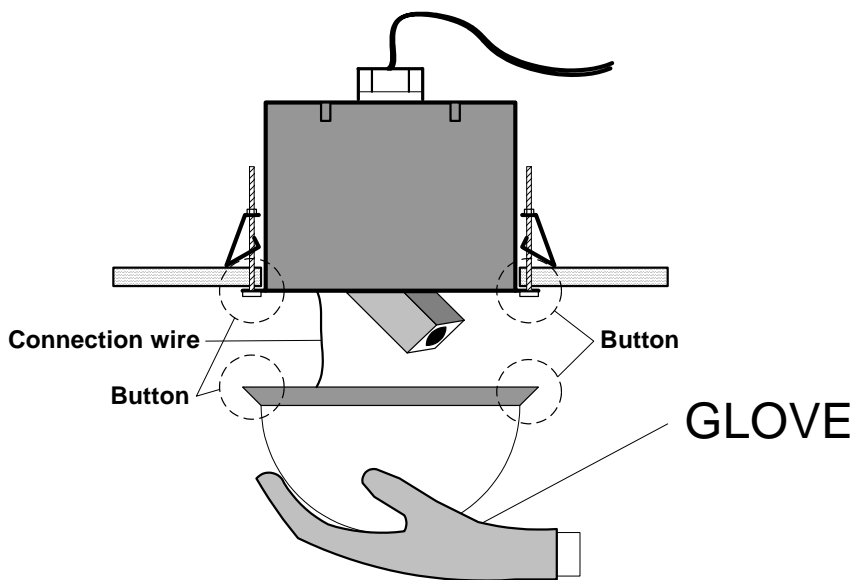
Notice: Please notice the polarity of control line. The EPTZ3000I will not work if the polarity of control line is mis-connected.

6. Align the two screw holes on the bottom of mechanical part to the two bolts on the base of the housing, and twist the mechanical part clockwise a little bit in order to engage it with the base. Screw the two bolts on the base, and then connect and fix the connection bus to the PCB board on the mechanical part.



Notice: The camera module on the mechanical part is very sensitive. Please be careful when installing this part.

7. Remove the lens protection cover before installing the bulb. Screw the connection wire to the housing in order to prevent the bulb from being drop down. Align the 2 buttons on the bulb base with the 2 buttons on the housing, and push bulb base to clip the housing.

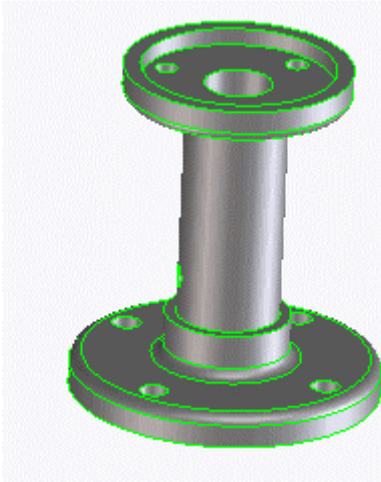


Notice: In order to protect the bulb from dirt and scrape, please put on the gloves before installing the bulb.

8. Turn on the power, and start to operate the EPTZ3000I.

2.5. Accessories

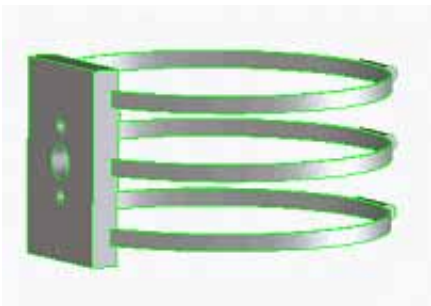
2.5.1. EPTZ-CPMA: Ceiling Pendant Mount Adapter



The pole mount is used for installing a speed dome on the ceiling indoors or outdoors.

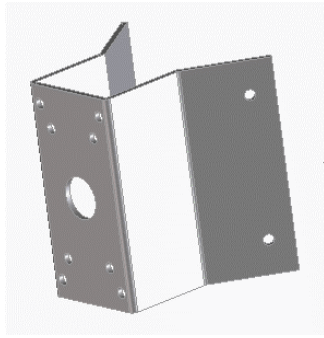
The extension poles are available for the pole mount.

2.5.2. EPTZ-PMA: Pole Mount Adapter



The pole adapter is used for installing a wall mount bracket to a pole indoors or outdoors.

2.5.3. EPTZ- CMA: Corner Mount Adapter



The corner mount are used for installing a wall mount bracket to a 270° corner of walls indoors or outdoors.

3. EPTZ3000/EPTZ3000I CAMERA SETUP MENU

In this section, setup and operation guide of EPTZ3000/EPTZ3000I will be introduced. There are 18 items of the setting menu. However, there is only one line on the line display, so using some combination keys to operate is necessary.

3.1. Structure of the Setup Menu

Press **MENU** to enter camera setup menu.

Press **Shift** + Joystick up/down to change subentries, and right/left to change the setting.

Items	Option
→ CAM ID	-----
→ DZOOM	OFF / ON
→ FOCUS	AUTO / MAN
→ IRIS	AUTO / MAN
→ DISPLAY	OFF / ON
→ WBC MODE	OFF / ON
→ TITLE DISP	OFF / ON
→ ALM-IN1 SET	OFF / N.C. / N.O.
→ ALM-IN2 SET	OFF / N.C. / N.O.
→ ALM-IN3 SET	OFF / N.C. / N.O.
→ ALM-IN4 SET	OFF / ON
→ ALM-IN PRIO	2341 / 3412 / 4123 / 1234
→ ALM-OUT	OFF / 3 / 5 / 10 / 20 / 30 / 60 SEC
→ WDR	LOW / MIDDLE / HIGH / OFF
→ SHUTTER	ESC / A.FLK/ 1/60 / 1/160 / 1/250 / 1/1000 / 1/2500 / 1/10000 / 1/120000 / X2 / X4 / X6 / X8
→ AGC	OFF / LOW / MIDDLE / HIGH
→ PRIVATE ZONE	OFF / ON
→ AUTO REGRESS	OFF / ON
→ X CNT	
→ Y CNT	
→ PO CNT	
→ OP HR	
→ LOAD DEFAULT	
→ EXIT MENU	

3.1.1. Camera Setup Menu

Press **MENU** to enter camera setup menu.

Press **Shift** + Joystick up/down to change subentries, and right/left to change the setting.

1. CAM ID : The name assigned to the camera.

2. DZOOM : Digital zoom enable or disable.

ON: Enable a digital zoom.

OFF: Disable a digital zoom.

3. FOCUS : Focus type, auto focus, manual focus and one push focus are available.

AUTO: Auto focus is enabled.

MAN: Manual focus is enabled.

ONE PUSH: Enable the one push trigger focus mode. The focus lens holds the same position until the next trigger command is received. This function prevents the wrong focus in dark.

4. IRIS : Iris type, auto iris and manual iris are available.

AUTO: Auto iris is enabled.

MAN: Manual iris is enabled.

5. DISPLAY: Display the zoom multiple.

ON: Display the zoom multiple.

OFF: Disable the zoom multiple display.

6. WBC MODE: White balance control mode.

AUTO: Auto white balance compensation.

2000K: Manual white balance compensation in 2000K color temperature.

3200K: Manual white balance compensation in 3200K color temperature.

5100K: Manual white balance compensation in 5100K color temperature.

Note: WBC setting will affect the wide dynamic range, or other image performance. To adjust a proper value is important.

7. TITLE DISP: Display the title.

ON: Display the title.

OFF: Disable the title display.

8. ALM-IN1 SET : The status of input alarm 1.

N.O.: Enable a normal open alarm input.

N.C.: Enable a normal close alarm input.

OFF: Disable alarm input.

9. ALM-IN2 SET : The status of input alarm 2.

N.O.: Enable a normal open alarm input.

N.C.: Enable a normal close alarm input.

OFF: Disable alarm input.

10. ALM-IN3 SET : The status of input alarm 3.

N.O.: Enable a normal open alarm input.

N.C.: Enable a normal close alarm input.

OFF: Disable alarm input.

11. ALM-IN4 SET : The status of input alarm 4.

N.O.: Enable a normal open alarm input.

N.C.: Enable a normal close alarm input.

OFF: Disable alarm input.

12. ALM-IN PRIO : The priority of alarms.

1234: The alarm priority is 1>2>3>4.

2341: The alarm priority is 2>3>4>1.

3412: The alarm priority is 3>4>1>2.

4123: The alarm priority is 4>1>2>3.

13. ALM-OUT : Duration time of the alarm output.

OFF: Disable alarm output.

3 / 5 / 10 / 20 / 30 / 60 SEC:

14. WDR : Wide Dynamic Range.

LOW: Low wide dynamic range.

MIDDLE: Middle wide dynamic range.

HIGH: High wide dynamic range.

OFF: Disable wide dynamic range.

15. SHUTTER:

ESC: Auto electrical shutter

A.FLK: Anti-Flicker. Camera will auto adjust the shutter to reduce the flicker caused by fluorescent light.

1/60 (NTSC) and 1/50 (PAL): default manual shutter;

1/160: 1/160 sec shutter for both NTSC and PAL

1/250: 1/250 sec shutter for both NTSC and PAL

1/1000: 1/1000 sec shutter for both NTSC and PAL

1/2500: 1/2500 sec shutter for both NTSC and PAL

1/10000: 1/10000 sec shutter for both NTSC and PAL

1/120000: 1/120000 sec shutter for both NTSC and PAL

x2: two-time default manual shutter

x4: four-time default manual shutter

x6: six-time default manual shutter

x8: eight-time default manual shutter

16. AGC: Auto Gain Control

OFF: Auto Gain Control Off

LOW: Low Auto Gain Control

MIDDLE: Middle Auto Gain Control

HIGH: High Auto Gain Control

Note: AGC setting will affect the wide dynamic range, or other image performance. To adjust a proper value is important.

17. PRIVATE ZONE : Private zone masking.

ON: Enable the private zone masking.

OFF: Disable the private zone masking.

Press "**Enter**" to enter private zone setup mode, and the masking will turn into red. You

can set the masking size and position in the private zone setup mode.

In this mode, you can press

“Shift” + “6” to increase masking horizontal size;

“Shift” + “4” to decrease masking horizontal size;

“Shift” + “2” to increase masking vertical size;

“Shift” + “8” to decrease masking vertical size;

Shift Joystick to select the position where the masking is located.

“Enter” to confirm the size and position, and then the masking will turn into green again.

18. AUTO REGRESS : Auto regress to the shortest path during set a position. It can shorten the response delay, and increase the response performance and speed dome lifetime.

ON: Enable the auto regress function.

OFF: Disable the auto regress function.

19. X CNT : X-axis counter. This counter counts the x axis movement, and 1 is counted when the speed dome pans 360°.

20. Y CNT : Y-axis counter. This counter counts the y axis movement, and 1 is counted when the speed dome tilts 180°.

21. PO CNT : Position counter. This counter counts the go-position times, 1 is counted when speed dome goes to a position once.

22. OP HR : Operation hour. This counter counts the operation hours.

23. LOAD DEFAULT : Load default setting.

Select this item, and then press "Enter" to load default setting.

Press "Clr" + "Menu" whenever you want to quit menu setting.

24. EXIT : To exit.

Select this item, and then press "Enter" to quit setting.

Press "Clr" + "Menu" whenever you want to quit menu setting.

Select this item, and then press "Enter" to quit setting.

Press "Clr" + "Menu" whenever you want to quit menu setting.

4. EPTZ3000/3000I FUNCTION SETUP AND OPERATION

4.1. Manual Control Mode

- **Manual control:** Shift Joystick Up/Down/Left/Right, and turn it Clockwise/Counterclockwise to control speed dome.
Use the control keys which are Zoom, Focus and IRIS function keys on the keyboard to zoom In/Out, focus N (near)/F (Far), or IRIS +/-.
- **HOME Mode:** The camera view will go back to the home position when there is no keyboard operation in a specific time. The home position and the specific time can be set by pressing **Set** + **Home**.

4.2. Auto Pan Mode

- **Two point auto pan:** Press **A.Pan** to enter the auto pan mode, and then the system will ask you to enter the auto pan speed (1~239). Press **Enter** to start auto pan.
In order to set the two points, press **Set** + **A.Pan**, and then enter the dwell time (1~239 seconds) of each point.
- **360° auto pan:** Press **Shift** + **A.Pan** to enter the 360° auto pan. The camera will turn 360° automatically, but not tilt.

4.3. Position Setting

- **Focus on a preset position:** Press the number key, and then press **Position** to focus on the number of preset position; or you can press **Position**, then enter the preset position number, and then press **Enter** to focus on the number of preset position.

- **Preset a position:** Shift the Joystick to the position you would like to preset, and then press **Shift** + **Position**. The system will ask you to enter the preset position number (1~239), and then press **Enter** to save the position. There are up to 239 positions can be preset.
- **Set the parameter of a preset position:** Press **Set** + **Position** to set the parameter of a preset position. You can set the going-to speed (1~239), dwell time (1~239 seconds), and the title of the position. Shift the joystick Right/Left to change bits, and shift the Joystick Up/Down to change the alphanumeric characteristic. The available alphanumeric characteristics are 0~9, A~Z, &, ?, !, :, ', ., ,, /, -, and a space.
- **Delete a preset position:** Press **Clr** + **Position** to delete a preset position. The system will ask you to enter the position number that you would like to delete, and then press **Enter**.

4.4. Tour Mode

In the tour mode, you can set a tour for viewing. There are 16 tours can be set, and 16 preset positions in a tour.

- **One-way tour Mode:** Press **Tour** to enter the tour mode. The system will ask you to enter the tour number you would like to run, and starts the tour after pressing **Enter**. To preset a tour before running it is necessary.

Preset a one-way tour: Press **Set** + **Tour** to preset a one-way tour. The system will ask you to enter preset position numbers (The positions need to be preset). After finish entering all positions, press **Stop** to quit, and then press **Enter** to save the tour.

- **To-and-fro tour mode:** Press **Shift** + **Tour** to run a to-and-fro tour. The system will ask you to enter the tour number you would like to run, and starts the tour after pressing **Enter**. To preset a tour before running it is necessary.

Note: The difference between the One-way tour mode and To-and-fro tour mode is that the return modes are different. For example: There is a tour with 3 preset positions 1, 2 and 3. The camera runs 1 2 3 1 2 3 in the One-way tour mode, and 1 2 3 2 1 in the To-and-fro tour mode.

4.5. Alarm Link to a Position/Tour

EPTZ3000/EPTZ3000I have 4 alarm inputs that can be set to link to a position or a tour when an alarm is triggered.

- **Set an alarm link:**

Press **F1** to set an alarm link. Enter the alarm number, and then press **Enter**.

Switch the Joystick up/down to select a position or a tour, enter a position or tour number, and then press **Enter** to confirm the alarm link setting.

- **Delete an alarm link:**

Press **Cir** + **F1** to delete a link of alarm to position/tour.

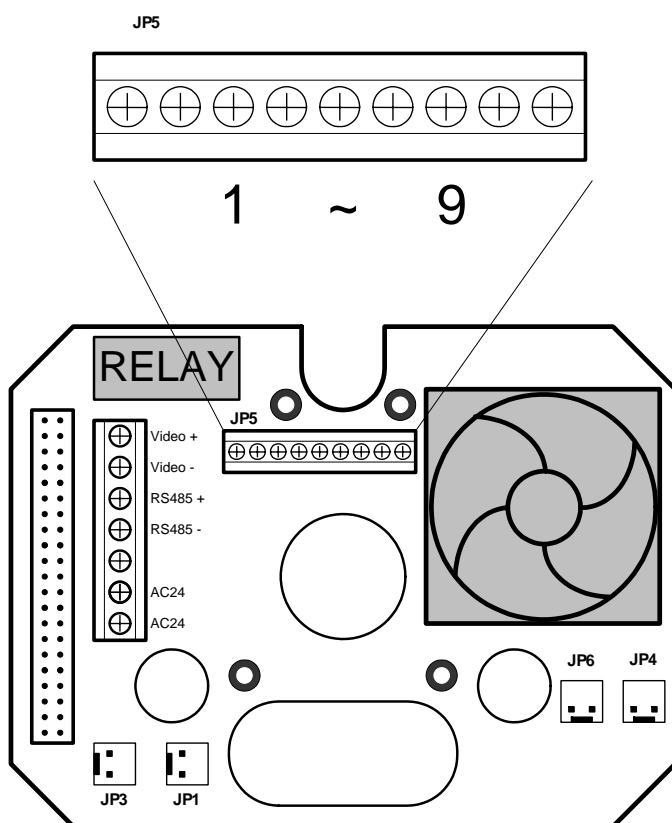
4.6. Other operations

The EPTZ3000/EPTZ3000I can work with a DVR that has PTZ control functions, and a matching protocol. The available control functions depend on different DVRs.

The EPTZ3000/EPTZ3000I can work with a keyboard that has PTZ control functions, and a matching protocol. The available control functions depend on different keyboards.

APPENDIX : The Alarm I/O Connection

There are 4 alarm inputs and 1 alarm output available. The alarm I/O connector that is marked as **JP5** is a nine-pin connector. It is located on the PCB board of the housing.



Pin #	Function
1	Alarm Input 3
2	Ground
3	Alarm Input 2
4	Alarm Input 1
5	Ground
6	Alarm Input 0
7	Normal Open (N.O.)
8	Common (COM)
9	Normal Close (N.C.)

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